

file: "

US-09-988-202-5

RESULT 1

ACCGKAB

LOCUS ACCGKAB 2180 bp DNA linear BCT 21-APR-1994

DEFINITION A.carrageenovora genes cgkA and cgkB, partial.

ACCESSION X71620

VERSION X71620.1 GI:437973

KEYWORDS kappa-carrageenase.

SOURCE Pseudoalteromonas carrageenovora

ORGANISM Pseudoalteromonas carrageenovora

Bacteria; Proteobacteria; Gammaproteobacteria; Alteromonadales;  
Alteromonadaceae; Pseudoalteromonas.

REFERENCE

1

AUTHORS Barbeyron, T., Henrissat, B. and Kloareg, B.

TITLE The gene encoding the kappa-carrageenase of Alteromonas  
carrageenovora is related to beta-1,3-1,4-glucanases

JOURNAL Gene 139 (1), 105-109 (1994)

MEDLINE 94156170

PUBMED 8112578

REFERENCE 2 (bases 1 to 2180)

AUTHORS Barbeyron, T.

TITLE Direct Submission

JOURNAL Submitted (15-APR-1993) T. Barbeyron, CNRS, Place George Teissier,  
29680 Roscoff, FRANCE

FEATURES

Location/Qualifiers

source

1. .2180

/organism="Pseudoalteromonas carrageenovora"

/mol\_type="genomic DNA"

/strain="ATCC 43555"

/db\_xref="taxon:227"

/clone="pKA1,pKA2,pKA3,pKA4"

gene

557. .1934

/gene="cgkA"

-35\_signal

557. .562

/gene="cgkA"

-10\_signal

581. .586

/gene="cgkA"

RBS

726. .729

/gene="cgkA"

CDS

741. .1934

/gene="cgkA"

/codon\_start=1

/transl\_table=11

/product="kappa-carraghenase"

/protein\_id="CAA50624.1"

/db\_xref="GI:437974"

/db\_xref="SWISS-PROT:P43478"

/translation="MKPISIVAFPIPAISMLLLSAVSQAASMQPPIAKPGETWILQAK  
RSDEFNVKDATKWNFQTENYGVWSWKNNENATVSNGLKLTTRKESHQRTFWDGCNQQQ  
VANYPLYYTSGVAKSRATGNYGYEARIKGASTFPGVSPAFWMYSTIDRSLTKEGDVQ  
YSEIDVVELTQKSAVRESDDLHNIVVKNKGKPTWMRPGSFPQTNHNGYHLPFDPRNDF  
HTYGVNVTKDKITWYVDGEIVGEKDNLYWHRQMNLTLSQLRAPHTQWKCNQFYPSAN  
KSAEGFPTSMEVDYVRTWVKVGNNSAPGEGQSCPNTFVAVNSVQLSAAKQTLRKGQS  
TTLESTVLPNCATNKKVIYSSSNKNVATVNSAGVVKAKNKGTTATITVKTKNKGKIDKL  
TIAVN"

sig\_peptide

741. .815

/gene="cgkA"

gene

2000. .2180

/gene="cgkB"

RBS

2000. .2004

/gene="cgkB"

CDS

2009. .>2180

/gene="cgkB"

/codon\_start=1

/transl\_table=11

/protein\_id="CAA50625.1"

/db\_xref="GI:437975"

/db\_xref="SWISS-PROT:P43479"

/translation="MKKVNLSKWIISISLLIICDYVYLIRTNVNEQANAEATAHMHY  
KINNTKHSKGKLD"

BASE COUNT        787 a     397 c     420 g     576 t  
ORIGIN

Query Match                    100.0%;   Score 2180;   DB 1;   Length 2180;  
Best Local Similarity        100.0%;   Pred. No. 0;  
Matches 2180;   Conservative        0;   Mismatches        0;   Indels        0;   Gaps        0;

```
Qy      1  GATCATATCATTTCCTTTGCAAATTAAAAATTCTCAAGATAGTCAAATAATTAGTTTTTTT 60
      |||
Db      1  GATCATATCATTTCCTTTGCAAATTAAAAATTCTCAAGATAGTCAAATAATTAGTTTTTTT 60

Qy     61  AAAGCTGACAAAGGGAGTGTGAGCAGGCAAGTACACCCACCTTGGCCTGTGCCTTGTA 120
      |||
Db     61  AAAGCTGACAAAGGGAGTGTGAGCAGGCAAGTACACCCACCTTGGCCTGTGCCTTGTA 120

Qy    121  AGTAAACTGCAAGAGCAAGATAGTAGTGAGTCTAAAGAGAGTAAGGCAGAGCAAGTTAA 180
      |||
Db    121  AGTAAACTGCAAGAGCAAGATAGTAGTGAGTCTAAAGAGAGTAAGGCAGAGCAAGTTAA 180

Qy    181  ATTAACAACGCGTTGTACAGAACGCAATGCTGTACATAGAAAACAATTATTTCAACGAT 240
      |||
Db    181  ATTAACAACGCGTTGTACAGAACGCAATGCTGTACATAGAAAACAATTATTTCAACGAT 240

Qy    241  ATAAATATAGACACGTTTGCTTTTCTGTTGGCGTAAGTCGCTCTTATCTCGTTAAACAA 300
      |||
Db    241  ATAAATATAGACACGTTTGCTTTTCTGTTGGCGTAAGTCGCTCTTATCTCGTTAAACAA 300

Qy    301  TTTAAGTTAGCAACGAATAAAACGATTAATAATAGAATCATAGAAGTAAGAATAGAGCAG 360
      |||
Db    301  TTTAAGTTAGCAACGAATAAAACGATTAATAATAGAATCATAGAAGTAAGAATAGAGCAG 360

Qy    361  GCTAAAAAAGTATTACTAAAAAAATCTGTTACAGAAACAGCTTATGAAGTTGGTTTAAAT 420
      |||
Db    361  GCTAAAAAAGTATTACTAAAAAAATCTGTTACAGAAACAGCTTATGAAGTTGGTTTAAAT 420

Qy    421  AACTCAAACACTTTCGCGACAGTTTTTAAAAAAAGAACAACACTACACGCCCAAGCAATTT 480
      |||
Db    421  AACTCAAACACTTTCGCGACAGTTTTTAAAAAAAGAACAACACTACACGCCCAAGCAATTT 480

Qy    481  AAACGTACTTTTTCCAGCTAAACACTACAATAACGATTAAGCCATTTTATAGAGA 540
      |||
Db    481  AAACGTACTTTTTCCAGCTAAACACTACAATAACGATTAAGCCATTTTATAGAGA 540

Qy    541  ACAGTAAACCATTTTTTGAGGTTTGGTGTGTATATAAATATTAAATATCCCCACTCGC 600
      |||
Db    541  ACAGTAAACCATTTTTTGAGGTTTGGTGTGTATATAAATATTAAATATCCCCACTCGC 600

Qy    601  TCAGCTTTTTTTGTGCGAGTTGTGAGAATTAGCTTAACAGGTAAGGTTTACGTATCTGTA 660
      |||
Db    601  TCAGCTTTTTTTGTGCGAGTTGTGAGAATTAGCTTAACAGGTAAGGTTTACGTATCTGTA 660

Qy    661  TATCTAAACTCTTCGAATATAACACTGTATCTGTTGCTGAGCTGTGGCTCAGTTCACACT 720
      |||
Db    661  TATCTAAACTCTTCGAATATAACACTGTATCTGTTGCTGAGCTGTGGCTCAGTTCACACT 720

Qy    721  AACAAAGGATGGATAAATAAATGAAACCTATAAGTATTGTGGCATTCCCTATACCAGCTA 780
      |||
Db    721  AACAAAGGATGGATAAATAAATGAAACCTATAAGTATTGTGGCATTCCCTATACCAGCTA 780

Qy    781  TAAGTATGCTTCTTTTAAGTGCAGTATCACAAGCAGCATCTATGCAACCTCCCATCGCAA 840
      |||
Db    781  TAAGTATGCTTCTTTTAAGTGCAGTATCACAAGCAGCATCTATGCAACCTCCCATCGCAA 840

Qy    841  AACCTGGTGAAACATGGATTTTACAAGCCAAACGCTCTGACGAATTTAACGTAAAAGATG 900
      |||
Db    841  AACCTGGTGAAACATGGATTTTACAAGCCAAACGCTCTGACGAATTTAACGTAAAAGATG 900

Qy    901  CGACAAAGTGGAACCTTCAAACAGAAAACATATGGGGTATGGTCTTGAAAAATGAAAATG 960
      |||
Db    901  CGACAAAGTGGAACCTTCAAACAGAAAACATATGGGGTATGGTCTTGAAAAATGAAAATG 960
```

Qy	961	CGACAGTATCTAATGGCAAACATAAAATTAACCACTAAGCGAGAATCTCATCAACGTACAT	1020
Db	961	CGACAGTATCTAATGGCAAACATAAAATTAACCACTAAGCGAGAATCTCATCAACGTACAT	1020
Qy	1021	TCTGGGATGGCTGTAATCAGCAGCAAGTTGCAAATTACCCACTTTATTATACATCGGGTG	1080
Db	1021	TCTGGGATGGCTGTAATCAGCAGCAAGTTGCAAATTACCCACTTTATTATACATCGGGTG	1080
Qy	1081	TCGCTAAATCCAGAGCTACAGGTAATTATGGCTATTACGAAGCTCGAATCAAAGGAGCGA	1140
Db	1081	TCGCTAAATCCAGAGCTACAGGTAATTATGGCTATTACGAAGCTCGAATCAAAGGAGCGA	1140
Qy	1141	GTACATTTCTTGGCGTATCGCCTGCTTTTGGATGTATAGCACCATTGACCGTTCATTAA	1200
Db	1141	GTACATTTCTTGGCGTATCGCCTGCTTTTGGATGTATAGCACCATTGACCGTTCATTAA	1200
Qy	1201	CGAAAGAAGGGGATGTCCAATATAGCGAAATAGACGTAGTGGAACCTACTCAAAAAAGTG	1260
Db	1201	CGAAAGAAGGGGATGTCCAATATAGCGAAATAGACGTAGTGGAACCTACTCAAAAAAGTG	1260
Qy	1261	CAGTGAGAGAGTCTGATCATGACTTACACAATATTGTAGTAAAAATGGAAAACCAACAT	1320
Db	1261	CAGTGAGAGAGTCTGATCATGACTTACACAATATTGTAGTAAAAATGGAAAACCAACAT	1320
Qy	1321	GGATGCGTCCAGGGTCTTTTCCGAGACAAATCATAACGGATACCATCTACCTTTCGATC	1380
Db	1321	GGATGCGTCCAGGGTCTTTTCCGAGACAAATCATAACGGATACCATCTACCTTTCGATC	1380
Qy	1381	CTCGAAATGACTTTCACACCTATGGTGTCAATGTAATAAGACAAGATCACTTGGTACG	1440
Db	1381	CTCGAAATGACTTTCACACCTATGGTGTCAATGTAATAAGACAAGATCACTTGGTACG	1440
Qy	1441	TAGATGGTGAAATTGTGGGCGAAAAGGATAACTTATACTGGCATCGTCAAATGAATCTCA	1500
Db	1441	TAGATGGTGAAATTGTGGGCGAAAAGGATAACTTATACTGGCATCGTCAAATGAATCTCA	1500
Qy	1501	CATTATCACAAGGCTTACGCGCGCCGCATACACAATGGAAATGTAATCAATTTTACCCAT	1560
Db	1501	CATTATCACAAGGCTTACGCGCGCCGCATACACAATGGAAATGTAATCAATTTTACCCAT	1560
Qy	1561	CAGCGAATAAATCAGCAGAAGGCTTCCCAACATCAATGGAAGTTGATTATGTAAGAACGT	1620
Db	1561	CAGCGAATAAATCAGCAGAAGGCTTCCCAACATCAATGGAAGTTGATTATGTAAGAACGT	1620
Qy	1621	GGGTAAAGGTGGGCAATAACAACCTCTGCTCCAGGCGAGGGGCAGTCATGTCCTAACACGT	1680
Db	1621	GGGTAAAGGTGGGCAATAACAACCTCTGCTCCAGGCGAGGGGCAGTCATGTCCTAACACGT	1680
Qy	1681	TTGTAGCTGTCAATAGTGTTCACCTAAGCGCAGCAAAACAAACACTTCGAAAGGGCCAAT	1740
Db	1681	TTGTAGCTGTCAATAGTGTTCACCTAAGCGCAGCAAAACAAACACTTCGAAAGGGCCAAT	1740
Qy	1741	CTACAACGCTAGAAAGCACAGTTCTTCCAACTGTGCAACCAACAAGAAAGTCATTTATT	1800
Db	1741	CTACAACGCTAGAAAGCACAGTTCTTCCAACTGTGCAACCAACAAGAAAGTCATTTATT	1800
Qy	1801	CATCAAGCAATAAAAAATGTGGCAACTGTGAACAGTGCTGGCGTTGTAAAAGCTAAAAATA	1860
Db	1801	CATCAAGCAATAAAAAATGTGGCAACTGTGAACAGTGCTGGCGTTGTAAAAGCTAAAAATA	1860
Qy	1861	AAGGCACTGCGACGATTACGGTTAAACTAAAAACAAAGGGAAAATAGATAAATTAACCA	1920
Db	1861	AAGGCACTGCGACGATTACGGTTAAACTAAAAACAAAGGGAAAATAGATAAATTAACCA	1920
Qy	1921	TTGCGGTGAATTAAGCTAACTCAAACTAGCCTCGAAGGATTGAGGCACTTTATTTATAGG	1980
Db	1921	TTGCGGTGAATTAAGCTAACTCAAACTAGCCTCGAAGGATTGAGGCACTTTATTTATAGG	1980
Qy	1981	TCTCAGGCTTCGACTTTTGGAGGGGGTATGAAAAAGGTAATTTATCCAGCAAGTGGAT	2040
Db	1981	TCTCAGGCTTCGACTTTTGGAGGGGGTATGAAAAAGGTAATTTATCCAGCAAGTGGAT	2040

Qy	2041	AATTAGCATTAGTTTACTAATCATTGTGATTATGTTTATTTAATACGAACAAACGTTAA	2100
Db	2041	AATTAGCATTAGTTTACTAATCATTGTGATTATGTTTATTTAATACGAACAAACGTTAA	2100
Qy	2101	CGAGCAAGCTAACGCAGAAGCTACTGCACATATGCATTACAAAATAAATAATACGAAACA	2160
Db	2101	CGAGCAAGCTAACGCAGAAGCTACTGCACATATGCATTACAAAATAAATAATACGAAACA	2160
Qy	2161	CTCAAAGGAAAGCTTGATC	2180
Db	2161	CTCAAAGGAAAGCTTGATC	2180

Title:

US-09-988-202-6

RESULT 1

I39507

kappa-carraghenase - *Alteromonas carrageenovora*

C;Species: *Alteromonas carrageenovora*

C;Date: 19-Jul-1996 #sequence\_revision 19-Jul-1996 #text\_change 08-Oct-1999

C;Accession: I39507; S40202

R;Barbeyron, T.; Henrissat, B.; Kloareg, B.

Gene 139, 105-109, 1994

A;Title: The gene encoding the kappa-carrageenase of *Alteromonas carrageenovora* is related to beta-1,3-1,4-glucanases.

A;Reference number: I39507; MUID:94156170; PMID:8112578

A;Accession: I39507

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 1-397 <RES>

A;Cross-references: EMBL:X71620; NID:g437973; PIDN:CAA50624.1; PID:g437974

C;Genetics:

A;Gene: cgkA

Query Match 64.9%; Score 2116; DB 2; Length 397;  
Best Local Similarity 100.0%; Pred. No. 7e-136;  
Matches 397; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	167	MKPISIVAFPIPAISMLLSAVSQAASMQPPIAKPGETWILQAKRSDEFNVKDATKWNFQ	226
Db	1	MKPISIVAFPIPAISMLLSAVSQAASMQPPIAKPGETWILQAKRSDEFNVKDATKWNFQ	60
Qy	227	TENYGVWSWKNNENATVSNGLKLTTKRESHQRTFWDGNCQQQVANYPLYTSGVAKSRAT	286
Db	61	TENYGVWSWKNNENATVSNGLKLTTKRESHQRTFWDGNCQQQVANYPLYTSGVAKSRAT	120
Qy	287	GNYGYYEARIKGASTFPGVSPAFWMYSTIDRSLTKEGDVQYSEIDVVELTQKSAVRES DH	346
Db	121	GNYGYYEARIKGASTFPGVSPAFWMYSTIDRSLTKEGDVQYSEIDVVELTQKSAVRES DH	180
Qy	347	DLHNIVVKNGKPTWMRPGSFQTNHNGYHLPFDPRNDFHTYGVNVT KDKITWYVDGEIVG	406
Db	181	DLHNIVVKNGKPTWMRPGSFQTNHNGYHLPFDPRNDFHTYGVNVT KDKITWYVDGEIVG	240
Qy	407	EKDONLYWHRQMNLTLSQLRAPHTQWKCNQFYPSANKSAEGFPTSMEVDYVRTWVKVGNN	466
Db	241	EKDONLYWHRQMNLTLSQLRAPHTQWKCNQFYPSANKSAEGFPTSMEVDYVRTWVKVGNN	300
Qy	467	NSAPGEGQSCPNTFVAVNSVQLSAAKQTLRKQSTTLESTVLPNCATNKKVIYSSSNKNV	526
Db	301	NSAPGEGQSCPNTFVAVNSVQLSAAKQTLRKQSTTLESTVLPNCATNKKVIYSSSNKNV	360
Qy	527	ATVNSAGVVKAKNKG TATITVKT KNKGIDKLTI AVN	563
Db	361	ATVNSAGVVKAKNKG TATITVKT KNKGIDKLTI AVN	397